Characterization Well R-22:

Location: TA-54, Mesita del Buey near White Rock, NM.

NAD 83 Survey coordinates (brass marker in NW corner of cement pad):
x:1645324.4 E y: 1757111.1 N
z: 6650.5 ft asl

Drilling: hollow stem auger and fluid-assist air rotary reverse circulation with casing advance
Phase 1 Start date: 8/17/00
Phase 1 End date: 8/21/00
Phase 2 Start date: 9/8/00
Phase 2 End date: 10/11/00

Borehole drilled to 1489 ft

Data collection:
Hydrologic properties:
Field Hydraulic Testing: Slug tests conducted on screens 2, 3, 4, and 5.
Cores/cuttings submitted for geochemical and contaminant characterization: (0)
Groundwater samples submitted for geochem and cont. characterization: (2)
Geologic properties:
Mineralogy, petrography, and chemistry (28)
Borehole logs:
Lithologic (0-1489 ft)
Video (LANL tool) 187-254 ft and 580-740 ft.
Natural gamma (LANL tool): cased 0-1330 ft, open hole 1330-1475 ft.
Schlumberger Logs (0-1330 ft cased, 1330-1477 ft open hole):Neutron porosity, Spectral Gamma, Gamma-Gamma Density, and Elemental Capture Spectroscopy

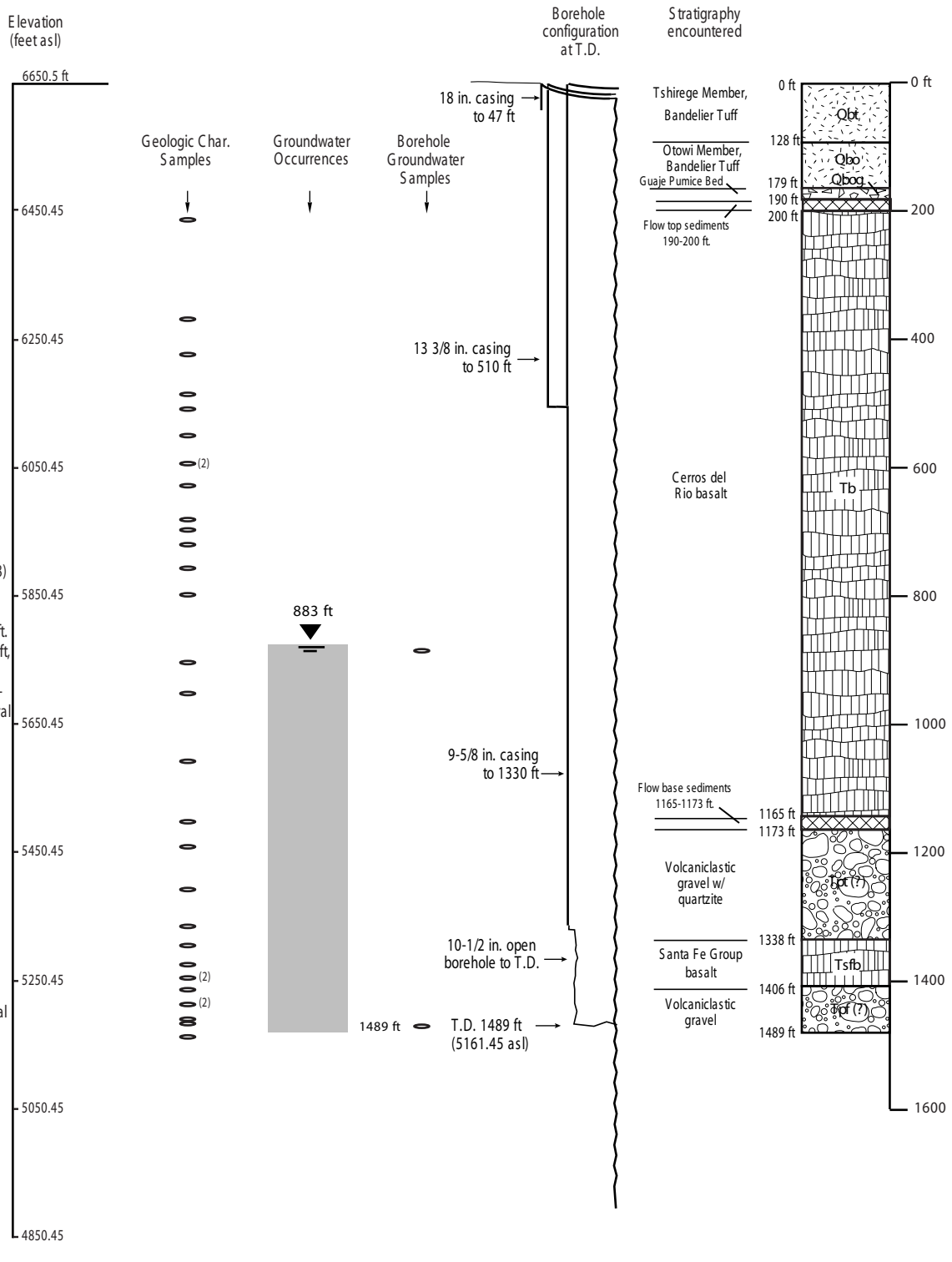
Contaminants Detected in Borehole Samples:
Regional groundwater: borehole screening data indicate tritium above background.

Well construction:
Drilling Completed: 10/11/00
Contract Geophysics: 10/13/00
Well Constructed: 10/17/00-11/03/00
Well Developed: 11/04/00-11/14/00
Westbay Installed: 12/07/00-12/10/00

Casing: 4.5-in I.D. stainless steel with external couplings

Number of Screens: 5
4.5-in I.D. pipe based, s.s. wire-wrapped; 0.010-in slot

Screen (perforated pipe interval):
Screen #1 - 872.3 ft to 914.2 ft
Screen #2 - 947.0 ft to 988.9 ft
Screen #3 - 1272.2 ft to 1278.9 ft
Screen #4 - 1378.2 ft to 1384.9 ft
Screen #5 - 1447.3 ft to 1452.3 ft



Well development consisted of brushing, bailing, and pumping each screen; and bailing and pumping the sump. Pump development was conducted with a single packer inflated below each targeted screen.

Groundwater occurrence was determined by recognition of first water produced while drilling. Static water levels were determined after the borehole was rested.

Geologic contacts determined by examination of cuttings and interpretation of natural gamma logs. Contacts may be refined by analysis of geologic samples by petrography and rock chemistry.

Construction, stratigraphic, and hydrologic information for Hydrogeologic Workplan characterization well R-22.